

ROUNDING OPERATIONS IN COMPUTER PROCESSOR

ABSTRACT

[0067] Various methods for performing rounding operations in a computer processor are described. A machine instruction sets the rounding mode, which is automatically applied to subsequent machine instructions. Using machine instructions to round results according to the selected rounding mode has several advantages over software-implemented rounding techniques, such as faster execution and concise code. A variety of rounding modes can be specified. Depending in part on the specified rounding mode and on the sign of the value to be rounded, a rounding term is added to the value to be rounded. Adding this rounding term ensures that the desired result is obtained. The value thus obtained is then right-shifted.